ABSTRACT OF DISCLOSURE

A data network and a method for providing prioritized data movement between endpoints connected by multiple logical channels. Such a data network may include a first node comprising a first plurality of first-in, first-out (FIFO) queues arranged for high priority to low priority data movement operations; and a second node operatively connected to the first node by multiple control and data channels, and comprising a second plurality of FIFO queues arranged in correspondence with the first plurality of FIFO queues for high priority to low priority data movement operations via the multiple control and data channels; wherein an I/O transaction is accomplished by one or more control channels and data channels created between the first node and the second node for moving commands and data for the I/O transaction during the data movement operations, in the order from high priority to low priority.